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FEDERAL COMMUNICATIONS COMMISSION
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FEDERAL COMMUNICATIONS COMMISSION
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In the Matter of \$
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Amendment of Section 2.106 of the \$ ET Docket No. 95-18
Commission's Rules to Allocate \$ RM-7927
Spectrum at 2 GHz for Use \$
by the Mobile-Satellite Service \$

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**COMMENTS OF
SOUTHWESTERN BELL MOBILE SYSTEMS, INC.**

Southwestern Bell Mobile Systems, Inc. (SBMS) files these comments in response to the Federal Communications Commission's (Commission) Notice of Proposed Rulemaking¹ in this proceeding:

I. THE COMMISSION SHOULD ALLOCATE THE 40 MEGAHERTZ AT 1990-2015 MHz AND 2180-2200 MHz TO MOBILE SATELLITE SERVICE.

In the NPRM the Commission proposes to allocate spectrum to mobile satellite service (MSS). The Commission is considering an allocation from the 1990-2025 MHz and 2165-2200 MHz bands to MSS. One alternative being considered is to allocate only the 40 megahertz at 1990-2010 MHz and 2180-2200 MHz.² Another alternative is to allocate the entire 70 megahertz from 1990-2025 MHz and 2165-2200 MHz. SBMS strongly supports the first alternative to allocate only the 40 megahertz that was allocated at the 1992 World Administrative Radio Conference (WARC 1992) and to defer action on the reallocation of the additional spectrum.

¹In the Matter of Amendment of Section 2.106 of the Commission's Rules to Allocate Spectrum at 2 GHz for Use by the Mobile Satellite Service, ET Docket No. 95-18, RM-7927 Notice of Proposed Rule Making (Released January 31, 1995). ("NPRM").

²NPRM, para. 15.

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A. Reallocation of the 2160-2180 MHz Band Will Have a Detrimental Affect on Rural Cellular Service.

SBMS currently holds licenses in the 2160-2180 MHz band which are used to interconnect cell sites in the rural areas to each other and to the Mobile Telephone Switching Office. Such interconnections are essential to the provision of cellular service in such areas. The use of 2 GHz paths in rural areas by cellular carriers has resulted in the provision of quality mobile telecommunication service at an affordable price throughout rural America. The 2 GHz frequency provides the appropriate propagation characteristics needed in the rural service areas--the ability to propagate long distances with minimal interference from terrain and vegetation. Thus, the 2 GHz paths are essential in the rural service areas where cell sites are farther apart and the availability of wireline facilities for such intra-system communication are cost prohibitive, presuming of course that wireline facilities are even available, which is not always the case in remote areas.

The proposed migration of such 2 GHz paths to 6 GHz is simply not an adequate solution. The 2 GHz frequency normally radiates anywhere from 8-15 miles further than the 6 GHz which is being proposed for migration. Thus, 2 GHz paths might have to be replaced by multiple 6 GHz paths of shorter distances requiring the deployment of additional facilities and towers.

The migration of cellular carriers from 2 GHz paths to 6 GHz path will also have a significant impact on tower loadings and may result in some existing towers becoming obsolete. A 6 GHz

path requires a substantially larger antenna than the 2 GHz path. Towers are engineered for specific applications and specific load levels. A tolerance for twist and sway is included and is substantially more critical with the larger, weightier antennas required for 6 GHz frequencies. Replacing a 6' grid antenna used for 2 GHz with a 8' solid dish antenna for 6 GHz will basically quadruple the weight on the tower. A migration to 6 GHz also causes tower problems because of the change in centerlines required for the higher frequency bands. Again, the original tower studies were for antenna(s) at specific heights--a change in centerlines obsoletes such studies. In addition, on leased towers the owner may not be willing to allow the increased loading on the tower for a switch to 6 GHz, thus forcing a relocation of facilities, which may jeopardize the continuity of cellular service.

Thus, reallocating spectrum in the 2160-2180 MHz bands will be problematic for cellular service in the rural areas. The 6 GHz and 11 GHz frequencies simply do not have the adequate propagation characteristics needed in the rural areas and a migration to such frequencies will be costly and could detrimentally affect cellular service currently being provided in rural areas. The Commission should refrain from reallocating the 2160-2180 MHz band.

B. Reallocating the 2160-2180 MHz Band Does Not Further the Commission's Stated Purpose in this Proceeding.

The Commission notes that the reallocation of the spectrum to MSS is to provide communication services in remote and

rural areas and to provide access to new services.³ Such purpose is not served by merely adding costs and disrupting the mobile communication services already available to rural Americans. It is economically inefficient to relocate existing mobile services merely to add additional mobile services. The emphasis being placed on MSS providing service in rural service areas is misplaced without a consideration of the services being offered by cellular carriers in such areas.⁴ Requiring cellular carriers to migrate from the 2 GHz paths to frequencies which are less desirable for use in rural areas due to propagation characteristics does not further the Commission's purpose of providing benefits to rural America. The Commission should adopt the option of allocating only 40 MHz at 1990-2010 and 2180-2200 MHz ranges to MSS.

CONCLUSION

For the reasons stated herein the Commission should allocate the 40 MHz at 1990-2010 and 2180-2200 range to MSS and not reallocate the 2160-2180 range.

³NPRM, para. 7.

⁴ Further, in several areas Rural Service Area (RSA) licensees are still in their five year build out period. In areas where the five year build out has expired and the interest in obtaining the right to obtain licenses to serve the "unserved area" through Section 22.949 et seq. has been great.

Respectfully submitted,

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